

REMARKS

This Amendment and Response is responsive to the Office Action mailed December 14, 2004. In that Action: claims 1-26 were pending; claim 11 was objected to for language informalities; claim 25 was objected to as failing to comply with the enablement requirement; claims 1, 3-10, 14, 16-24, and 26 were rejected under 35 USC §103(a) as being unpatentable over Liu, et al. (USPN 4,778,259); claims 2, 12, and 15 were rejected under 35 USC §103(a) as being unpatentable over Liu (USPN 6,141,076) in view of Iwayama (USPN 5,323,253); claim 11 was objected to as being dependent on a rejected base claim; and claim 13 was allowed.

Claim 11 has been amended in order to correct an inadvertent error in claim dependency. Reconsideration of the rejected claims is hereby requested.

The rejection to the claims are addressed to the extent they can be understood in light of the errors in the most recent Office Action. As one example, the Examiner's rejection on page 3 of claim 25 under section 112 is nonsensical. Moreover, this same nonsensical language has been used previously in the Final Office Action mailed March 25, 2003 in the middle of page 4. This nonsensical language was pointed out in response to the Final Office Action and now appears again in this Office Action. Specifically, the Examiner states the following "Since Liu's disclosure, which directs to a non-surface-stabilized ferroelectric liquid crystal, has been patented, Liu's disclosure presumes valid over the claimed invention." While the first portion of the sentence can be understood, the latter portion "Liu's disclosure presumes valid over the claimed invention" makes no sense. It is not understood what it means for a United States patent, which of course is presumed to be valid, to be valid over a claimed invention. Moreover, what does this have to do with the enablement issue discussed earlier in the Examiner's rejection?

As another example, the rejection of claims 1, 3-10, 14, 16-24, and 26 under section 103 as being unpatentable over Liu lists United States Pat. No. 4,778,259. However, this patent number does not correspond to a Liu patent but instead corresponds to another prior art patent of record in this case, Kitayama. Since the discussion in the rejection seems to relate to the Liu patent, USPN 6,141,076, and not to Kitayama, it is assumed that the Kitayama number was mistakenly used when the Liu number was intended.

In previous Office Actions, the Examiner has argued that the Liu patent anticipates many of the claims of the present invention. An appeal was eventually filed and an argument submitted in the applicants' appeal brief disputing this position. The Examiner now takes the position that the Liu reference obviates many of the claims of the present invention. Each of the claims is believed to be patentable over Liu at least because Liu does not disclose a cross-buffed device, system, or method as claimed wherein the ferroelectric liquid crystal material is free of chevron structures. Further Liu does not discuss the ferroelectric liquid crystal material being free of chevron structures without the need to otherwise apply an additional treatment to the optical device.

Generally, conventional ferroelectric liquid crystal (FLC) devices have undesirable chevron structures that are formed in the FLC material (see discussion in applicants' patent application at page 2, lines 18-33). Various attempts have been made to prevent the formation of chevron structures, such as applying an additional treatment in the form of an electrical signal to the FLC material after it is inserted into the device (see applicants' patent application at page 2, line 34 through page 3, line 3). When the chevrons are straightened out by such an additional treatment, they are said to have a structure called "quasi-bookshelf" (see previously provided passages on pp 227-229 in Ferroelectric and Antiferroelectric Liquid Crystals, by Sven T.

Lagerwall (1999)).

Liu discusses chevrons and quasi-bookshelf structures in only two places in his patent (once in column 1 at lines 31-35, and again in column 4 at lines 35-37). In both places in Liu, the discussion is specifically limited to FLC cells that have either parallel or anti-parallel buffing; “crossed-buffed” cells are excluded. Thus, Liu is just reciting the prior-art problems with parallel-buffed devices that are also recited in applicants’ patent application. Liu’s teaching about his own invention, i.e. about cross-buffed FLC devices, is completely silent on the issue of chevrons. Applicants’ invention is directed towards, and in its claims is limited to, FLC devices that are cross buffed.

The argument in the Office Action (as to why the Examiner believes that Liu obviates a chevron-free structure) is not logical. The Examiner argues on page 5 of the Office Action that since Liu obtains excellent contrast with weak buffing or even greater contrast with strong buffing, it is therefore obvious that Liu creates a structure free of chevron. The Examiner provides no support for his conclusion that excellent contrast necessarily means that a device is free of chevrons.

Without support for this conclusion, the obviousness rejection of claims 1 and 14 (and the dependent claims thereon) is improper. The applicants respectfully submit that claims 1 and 14 and all the claims dependent thereon are therefore patentable.

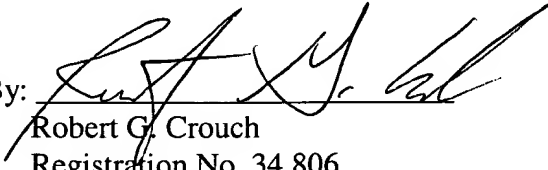
Claims 2, 12, and 15 have been rejected as obvious over the combination of Liu and Iwayama. Since independent claims 1 and 14 are patentable over Liu, these dependent claims are patentable as well.

Based upon the foregoing, Applicants believe that all pending claims are in condition for allowance and such disposition is respectfully requested. In the event that a telephone

conversation would further prosecution and/or expedite allowance, the Examiner is invited to contact the undersigned.

Respectfully submitted,

MARSH FISCHMANN & BREYFOGLE LLP

By: 

Robert G. Crouch

Registration No. 34,806

3151 South Vaughn Way, Suite 411

Aurora, Colorado 80014

(720) 562-5506

Date: March 14, 2005